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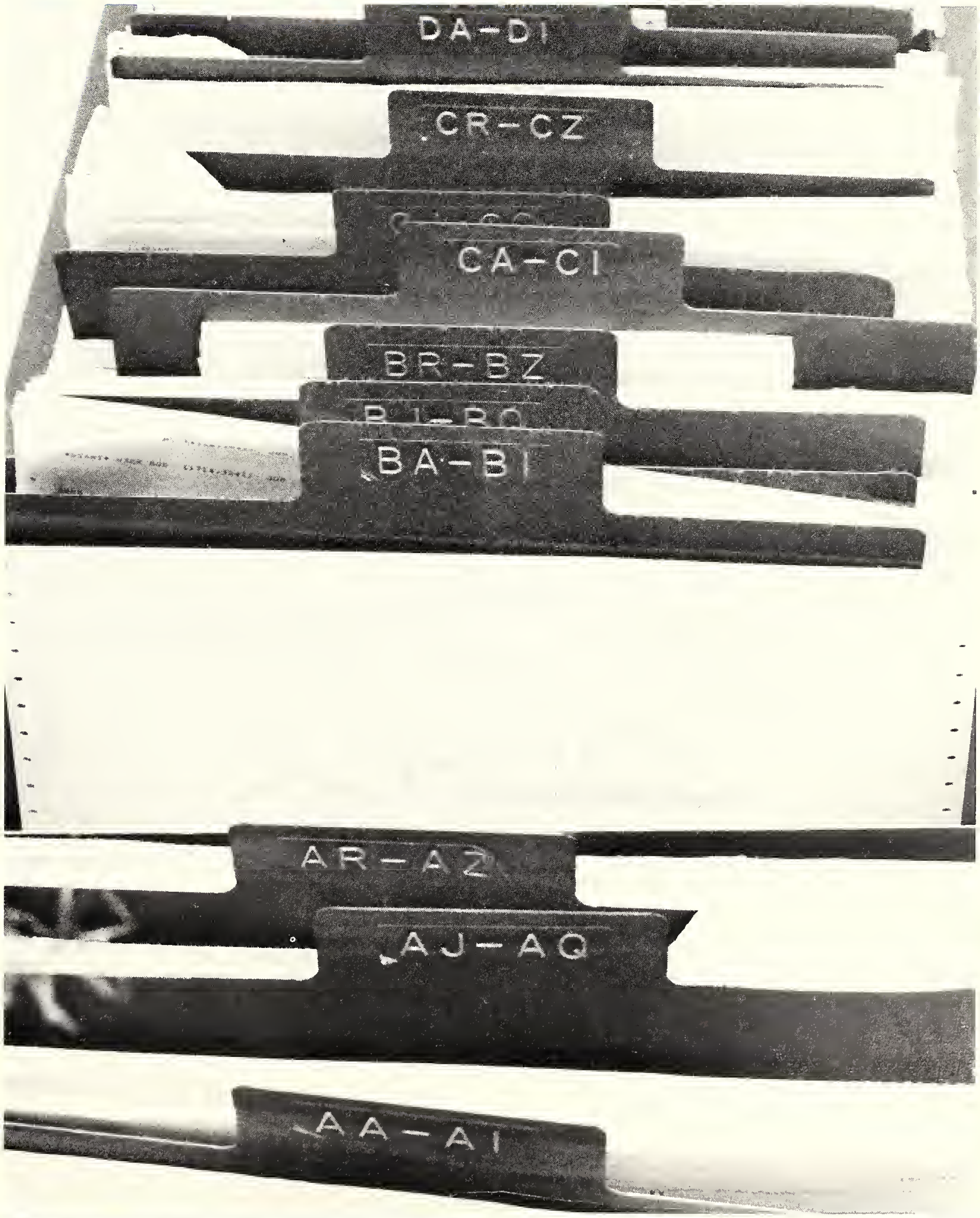

COMPUTERNEWS

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WELCOME BACK

I would like to take this opportunity to welcome you back to a new year of computing with UTCS.

Significant objectives have been realized this year, resulting in improved computing services and reduced operating expenses.

Over the summer we successfully completed the change in our complement of IBM computer systems, replacing the IBM 3033, 3031 and 165 systems with a symmetrical pair of IBM 3033N8s. This change has allowed us to update the former Sharp APL and IBM ATS services, which were of early 1970 vintage, to the latest available versions of these systems. The major objective was to transfer users with minimum disruption over the summer months. Both services will be further enhanced over the coming year. UTCS will take advantage of the capabilities offered in the newer versions of APL and ATMS.

Future benefits of the symmetrical 3033N8 configuration will include greater operational flexibility for backup of critical services and also improved load sharing as the demand for different services changes over time.

In order to realize the full benefits of the symmetrical configuration, several major projects have been undertaken by our Systems Group. These include the implementation of a comprehensive security system for controlling access to and protecting user data; the implementation of common telecommunications controllers to permit dynamic switching of terminals between both systems; and the improvement of capabilities to access online user data from either system.

This past year also saw a reorganization within UTCS along Product Lines. This has helped us to set goals more effectively and to better serve the end user. Product Line Group strategy was instrumental in the smooth switchovers to the new APL and ATMS services mentioned. Also, VIVA development has progressed well in the past year and the VIVA concept has been widely accepted by the students who used it. Some deficiencies in the initial implementation that were drawn to our attention by users have been corrected. Plans are currently underway for the installation of further VIVA facilities.

One major change forthcoming is the relocation of the DEC-10 computer due to renovations of the Sandford Fleming Building. We are trying to find a suitable location that will provide a minimal amount of disruption to service, although some minor service interruptions are to be expected when the DEC is moved at the end of this year.

We look forward to serving you in the months ahead and wish you a successful and productive academic year.

Rein Mikkor

THE COMPUTING SERVICES REPRESENTATIVE

The Computing Services Representative (CSR) is the interface or liaison between users and UTCS resources -- human, software and hardware. The CSRs' duties include advising, staff supervision and terminal operation. CSRs keep UTCS informed of user needs and make users aware of UTCS services. Several aspects of the CSR role are discussed below.

Advising

CSRs are the primary interface between the user community and UTCS. Users are encouraged to approach the CSR responsible for their Department or Faculty with questions regarding all aspects of UTCS. (Departments and Faculties with the designated CSR are listed at the end of this article.) CSRs handle 90% of initial inquiries directed to them. Problems outside their areas of expertise are handled such that they contact appropriate UTCS support staff on the user's behalf. In instances where problems are too technical or complicated, CSRs arrange a meeting between user and support staff. CSRs will monitor progress to the solution, assuring user satisfaction.

The above approach benefits both users and UTCS. It frees UTCS technical and support people to spend more time on system development, maintenance and evaluation. It also gives them the opportunty to produce documentation and educational aids for the user and to develop and introduce new products for the university community. The user benefits in that he deals with a single, knowledgeable individual within UTCS. This ensures that his problems are satisfactorily resolved and followed up. Since all user problems pass by the CSRs, general difficulties with or misunderstandings of UTCS services are identified and presented to the appropriate UTCS product group. In some instances, CSRs have their own areas of expertise and each CSR is a member of a product group.

CSRs (or their staff) are available to assist users from 9:00 - 5:00, Monday through Friday. In some instances, advising staff are also available during and outside these hours.

User Contact

CSRs contact their users on a regular basis to determine users' computer needs. User opinions regarding changes to software and hardware are actively solicited. In this way users contribute to UTCS decisions. Concurrently, CSRs contact members of the user community who are most affected by any proposed changes, to determine their impact. Because CSRs meet regularly, general trends can be passed on to the correct product group for further study. CSRs also keep the user informed about new products and services offered by UTCS. In some instances, CSRs direct a user to an already existing product to accommodate his needs. (There have been past occasions in which users, not aware of the full range of our services, have spent hours duplicating the results of existing, well-tested packages!)

Personal Development

An integral part of the CSR's job is personal development. Each CSR continues to upgrade his technical expertise. This involves both UTCS software/hardware and other products available in the industry. CSRs attend courses, seminars and conferences in order to upgrade skills. In some cases, CSRs gain expertise in specific areas by testing and evaluating new software packages. The role of the CSR is designed to be evolutionary, to change as user needs change. CSRs continually monitor their own effectiveness and make suitable modifications required in their jobs.

The Computing Services Repesentatives

Arts and Science Terminal

Bill Fehlner	978-6509

continued...

JURISDICTIONS FOR COMPUTING SERVICES REPRESENTATIVES (CSR)

Revised August 15, 1980 (sorted by Department/Faculty)

DEPARTMENT/FACULTY	CSR	PHONE
Academic Statistics	S. Chong	4357
Addiction Research Foundation	I. Prociuk	6875,6885
Admissions	S. Chong	4357
Advisory Bureau	M. Tapia	7109
Aerospace Studies	B. Blackburn	284-3173
Alumni Affairs	B. Blackburn	284-3173
Anthropology	B. Fehlner	6509
Applied Science & Engineering	S. Chong	4357
Applied Statistics	B. Fehlner	6509
Architecture	S. Chong	4357
Arts & Science Admin.	B. Fehlner	6509
Astronomy	B. Chambers	8823
Athletic & Recreation	P. Wall	828-5311
Behavioural Science	P. Wall	828-5311
Business Information Sytems	V. Cabanus	5040
Bookstores	I. Prociuk	6875,6885
Botany	B. Fehlner	6509
Budget Office	S. Chong	4357
Chemical Engineering	M. Tapia	7109
Chemistry	M. Tapia	7109
Child in City	I. Prociuk	6875,6885
Child Studies Institute	I. Prociuk	6875,6885
Civil Engineering	S. Chong	4357
Classics	M. Tapia	7109
Comtroller's Office	V. Cabanus	5040
Comptroller's Office	B. Chambers	8823
Computer Science	B. Chambers	8823
Criminology	S. Chong	4357
Dentistry	B. Blackburn	284-3173
East Asian Studies	S. Chong	4357
Electrical Engineering	S. Chong	4357
Engineering Science	S. Chong	4357
Environmental Studies	S. Chong	4357
Erindale Admin.	P. Wall	828-5311
Erindale College	P. Wall	828-5311
External	I. Prociuk	6875,6885
Faculty Club	V. Cabanus	5040
Faculty of Education	S. Chong	4357
Fees Department	B. Chambers	8823
Food Sciences	M. Tapia	7109
Forestry	S. Chong	4357
French	S. Chong	4357
Geography	B. Fehlner	6509
Geological Engineering	S. Chong	4357
Geology	M. Tapia	7109
German Studies	B. Fehlner	6509
Government	I. Prociuk	6875,6885
Graduate Studies	B. Blackburn	284-3173
Health Administration	I. Prociuk	6875,6885
Health Care Research Unit	I. Prociuk	6875,6885
History	P. Wall	828-5311
History & Philosophy of Science	P. Wall	828-5311
Hospitals	I.Prociuk	6875,6885
Housing Service	B. Fehlner	6509
Industrial Engineering	M. Tapia	7109
Industrial Relations	S. Chong	4357
Informational Services	B. Blackburn	284-3173
Innis College	B. Chambers	8823
Internal Audit Department	B. Chambers	8823
International Student Centre	S. Chong	4357
Italian Studies	S. Chong	4357

DEPARTMENT/FACULTY	CSR	PHONE
Joint Centre/Modern East Asia	S. Chong	4357
Joint Pgm. in Transportation	I. Prociuk	6875,6885
Law Faculty	B. Fehlner	6509
Library Automation Systems	B. Fehlner	6509
Library Science	B. Fehlner	6509
Linguistics	S. Chong	4357
Management Studies	B. Fehlner	6509
Mathematics	B. Fehlner	6509
Mechanical Engineering	M. Tapia	7109
Media Centre	P. Wall	828-5311
Medicine	M. Tapia	7109
Medieval Studies	S. Chong	4357
Metallurgy	M. Tapia	7109
Music	S. Chong	4357
Near Eastern Studies	B. Blackburn	284-3173
New College	B. Chambers	8823
Nursing	M. Tapia	7109
Nutrition/Foods Science	M. Tapia	7109
O.I.S.E.	I. Prociuk	6875,6885
Other Universities	I. Prociuk	6875,6885
Payroll Department	V. Cabanus	5040
Personnel Department	V. Cabanus	5040
Personnel	S. Chong	4357
Pharmacy	P. Wall	828-5311
Philosophy	P. Wall	828-5311
Physical & Health Education	P. Wall	828-5311
Physical Plant Dept.	S. Chong	4357
Physics	B. Chambers	8823
Placement Centre	S. Chong	4357
Policy Analysis	B. Fehlner	6509
Political Economy	B. Fehlner	6509
Pre-paid	I. Prociuk	6875,6885
Preventive Medicine	I. Prociuk	6875,6885
Private Funding	B. Blackburn	284-3173
Psychology	B. Fehlner	6509
Religious Studies	M. Tapia	7109
Research Administration	S. Chong	4357
Scarborough College	B. Blackburn	284-3173
Scarborough-Erindale Library	P. Wall	828-5311
School of Continuing Studies	B. Blackburn	284-3173
Social Work	S. Chong	4357
Sociology	S. Chong	4357
Spanish	S. Chong	4357
St. Michael's College	B. Chambers	8823
Statistics	B. Fehlner	6509
Student Admin. Council	S. Chong	4357
Student Awards	S. Chong	4357
Student Record Services	V. Cabanus	5040
Television Production Services	P. Wall	828-5311
Toronto School of Theology	I. Prociuk	6875,6885
Trinity College	M. Tapia	7109
University College	B. Chambers	8823
University of Toronto Press	I. Prociuk	6875,6885
Urban & Community Studies	B. Fehlner	6509
Urban & Regional Planning	B. Fehlner	6509
Victoria College	B. Chambers	8823
Woodsworth College	B. Chambers	8823
Wycliffe College	B. Blackburn	284-3173
Zoology	B. Fehlner	6509

JURISDICTIONS FOR COMPUTING SERVICES REPRESENTATIVES (CSR)

Revised August 15, 1980 (sorted by CSR)

NAME/LOCATION	DEPARTMENT/FACULTY
Bob Blackburn Room S630 Scarborough College 284-3173	Aerospace Studies Alumni Affairs Dentistry Graduate Studies Information Services Near Eastern Studies Private Funding Scarborough College School of Continuing Studies Wycliffe College
Vera Cabanus Room 368 McLennan Labs 978-5040	Business Information Systems Comptrollers Office Faculty Club Payroll Department Personnel Department Student Record Services
Bob Chambers Room 1202 McLennan Labs 978-8823	Astronomy Comptroller's Office Computer Science Fees Department Innis College Internal Audit Department New College Physics St. Michael's College University College Victoria College Woodsworth College
Sue Mai Chong Room 201 Engineering Annex 978-4357	Academic Statistics Admissions Applied Science & Engineering Architecture Budget Office Civil Engineering Criminology East Asian Studies Electrical Engineering Engineering Science Environmental Studies Faculty of Education Forestry French Geological Engineering Industrial Relations International Student Centre Italian Studies Joint Centre/Modern East Asia Linguistics Medieval Studies Music Personnel Physical Plant Dept. Placement Centre Research Administration Social Work Sociology Spanish Student Admin. Council Student Awards
Bill Fehlner Room 2133 Sidney Smith Bldg. 978-6509	Anthropology Applied Statistics Arts & Science Admin. Botany Geography German Studies Housing Service Law Faculty Library Automation Systems Library Science Management Studies Mathematics Policy Analysis Political Economy Psychology Statistics Urban & Community Studies Urban & Regional Planning Zoology
Ihor Prociuk Room 205 49 St. George 978-6875,6885	Addiction Research Foundation Bookstores Child in City Child Studies Institute External Government Health Administration Health Care Research Unit Hospitals Joint Pgm. in Transportation O.I.S.E. Other Universities Pre-paid Preventive Medicine Toronto School of Theology University of Toronto Press
Mark Tapia Room 204 49 St. George 978-7109	Advisory Bureau Chemical Engineering Chemistry Classics Food Sciences Geology Industrial Engineering Mechanical Engineering Medicine Metallurgy Nursing Nutrition/Foods Science Religious Studies Trinity College
Peter Wall Room 2043 Erindale College 828-5311	Athletic & Recreation Behavioural Science Erindale Admin. Erindale College History History & Philosophy of Science Media Centre Pharmacy Philosophy Physical & Health Education Scarborough-Erindale Library Television Productions Services

THE CSR continued

EAT/EUT	
Sue Mai Chong	978-4357
Erindale	
Peter Wall	828-5311
U of T Affiliates	
Ihor Prociuk	978-6875 or 978-6885
Physics	
Bob Chambers	978-8823
Scarborough	
Bob Blackburn	284-3173
Time-Sharing	
Mark Tapia	978-7109

Questions regarding CSRs should be directed to Ralph Lombardi at 978-7130.

Ralph Lombardi

PRODUCT LINES AND APPLICATIONS SUPPORT GROUP

During the past year UTCS has adopted a 'Product Line' approach to service support. Services offered by UTCS have been divided into 13 Product Line Groups (PLGs):

- APL
- CONTRACT PROGRAMMING
- COMMUNICATIONS AND SMALL SYSTEMS
- DATA PROCESSING
- DEC-10
- GRAPHICS
- LANGUAGES
- NUMERICAL METHODS
- STATISTICAL PACKAGES
- STUDENT SERVICES
- TEXT PROCESSING
- TS0/WYLBUR
- UTILITIES AND SYSTEM SERVICE

In the past, support for a package was usually provided from the machine service area on which the package was available. This method of support sometimes meant that support for similar packages was splintered across UTCS. The PLG approach focuses attention on a product area as a whole. Support for PLGs is drawn from across the various divisions within UTCS (Systems, CSR, Applications, etc.).

Members of the Applications Support Group have found their roles modified with the adoption of the Product Line approach. Members of the group serve as leaders of several of the PLGs. As PLG leaders they assist in the coordination of activities of members from other UTCS divisions. Most daily activities of Applications Group members are in support of PLG functions. Their responsibilities include the routine maintenance and updating of applications packages. In addition they still provide senior level advice on the use of these packages.

The adoption of the PLG approach has also led to an increased focus on documentation and courses. At present, UTCS is in the initial stages of reorganizing user documentation to better reflect its product orientation. Documentation will increasingly be organized by product and not by machine, as in the past. Applications Group members are the primary source for documentation of the product area.

As well as reorganizing its documentation, UTCS is offering an increased number of courses by product line. Applications Group members are presently developing courses designed to assist users in improving their skills within a given product area. (See the article "Fall Short Courses" in this issue.)

While many of the daily activities of the Applications Group have not changed over the past year, the PLG approach has pro-

continued...

PRODUCT LINES continued

vided a clearer focus for the execution of activities. We trust you will find that support for your computing requirements is better met. We look forward to the continuation of support through Product Lines.

Don Gibson

COMPUTING AT THE ENGINEERING ANNEX

Many students and professors are returning after a restful summer -- to you we extend a hearty welcome back! To new students and staff who will be using UTCS' facilities for the first time, we welcome you aboard and hope this year will be a successful one.

The Engineering Annex Terminal (EAT) is located at 11 King's College Road, behind the International Student Centre and just south of the Sandford Fleming Building. This terminal location contains four different computing facilities: a High Speed Job Stream (HSJS) undergraduate terminal, a batch-oriented General Purpose Job Stream (GPJS) terminal, interactive terminal facilities and the new VIVA system.

The Engineering Undergraduate Terminal (EUT) is designed for processing High Speed Job Stream (HSJS) jobs. This terminal provides 37 keypunches (of which 5 are reserved for express use), a 1200 line per minute printer and a 1000 card per minute reader. In addition to the machine area, there is a work room where students may sit and debug their programs.

The Engineering Annex Terminal (EAT) provides batch service for the General Purpose Job Stream users. EAT has three 1200 line per minute printers. Of the three printers, one is reserved for very large print jobs and special forms requirements. This printer is operated by the EAT operations staff and is located behind the counter. The other two printers are for self-service use. EAT has a 1000 card per minute reader with the Optical Mark Recognition (OMR) feature, a card punch, two interpreters, a GOULD 5200 plotter, 5 keypunches, three DECwriter interactive terminals and a Xerox Diablo terminal.

The interactive terminal facilities are located in Room 107A of the Engineering Annex building. This room contains 8 Volker-Craig interactive terminals hardwired to the DEC-1090 and 5 DECwriter interactive terminals (dial-up terminals).

At the Engineering Annex there are 8 VIVA workstations located in Room 203. Presently, the VIVA stations have been set up for use by students. With the aid of these workstations, a student is able to process course assignments on the High Speed Job Stream (see "VIVA Update" in this issue). In addition to the workstations there is a 'local' printer for ouput from the workstations.

The terminal is open 24 hours daily *except* for the following hours:

Friday at 22:00 to Saturday 08:00
Saturday at 20:00 to Sunday 08:00
Sunday at 20:00 to Monday 08:00

For assistance with the operational aspects of your programming jobs, we have cheerful, helpful I/O operators. Andrew, Jim and Steve will assist users in finding their jobs (lost or otherwise), fix interpreters, keypunches and interactive terminals which aren't working and provide information concerning UTCS policies and procedures. I/O operators may be reached at 978-7373.

To assist you with programming difficulties, we have a staff of part-time programming advisors, a full time terminal support advisor (TSA) and a Computing Services Representative (CSR).

Programming assistance from the part-time

continued...

ENGINEERING ANNEX continued

advisors will be available in the fall and winter terms during the following hours:

10:00 - 20:00 Monday to Thursday
10:00 - 17:00 Friday
13:00 - 17:00 Saturday & Sunday

The terminal support advisor, Ted Sikorski, is located in room 103A of the Engineering Annex or may be contacted by calling 978-4757 during regular working hours.

The Computing Services Representative, Sue Mai Chong, is located in Room 201 of the Engineering Annex. Contact Sue by calling 978-4357 during regular working hours.

Students and staff are encouraged to contact the CSR or TSA concerning UTCS policies, procedures, services and facilities. We also encourage you to use the graffiti sheets posted in the General Purpose terminal area and outside the High Speed Job Stream terminal to voice opinions and suggestions concerning the terminal and UTCS.

Welcome to computing at UTCS!

Sue Mai Chong

THE PHYSICS UNDERGRADUATE TERMINAL

The Physics Undergraduate Terminal (PUT) is situated in Room 1202 of the Burton Tower, St. George campus. Batch computing is supported by a CDC Cyber 18-05 workstation and a number of keypunches. Interactive computing is offered by means of three interactive terminals, 2 of which are hardcopy devices and all 3 of which are equipped with APL character sets.

To meet the demand for interactive computing, we will shortly install another CRT terminal. Additionally, we are investigating the possibility of installing a full screen, 3270-type terminal in a few months. Interactive computing at PUT will soon be improved by the installation of lines to the UTCS PACX front-end switch.

PUT is operated almost totally on a self-service basis. Because of the limited amount of space and high demand on the facilities, the equipment and facilities are restricted to faculty, staff and graduate student use.

Bob Chambers is the Computing Services Representative (CSR) responsible for the Physics Undergraduate Terminal. His office is Room 1203B of the Burton Tower and he can be reached by phone at 978-8823. Dave Sansom is the Programming Advisor and is at the PUT in the afternoon. The part-time advisor is John Geczy.

If you have any questions or computing problems, please drop by or phone us.

Bob Chambers

AST/ASUT

We welcome back all students, faculty and staff to the computing facilities at the Arts and Science Terminal (AST) and the Arts and Science Undergraduate Terminal (ASUT). We also extend a warm welcome to new users of these facilities in the Sidney Smith Building, St. George Street.

There are two new faces in the ranks of full time staff at AST and ASUT. Bill Fehlner became the Computing Services Representative (CSR) for Arts and Science in May. He came to UTCS from the Department of Computing Services at York University where he worked in Academic Services. Bill has had experience teaching at both the undergraduate and graduate levels. His research background includes developing and applying numerical analysis techniques in Physics. At York, Bill assisted humanities faculty in utilizing computer resources.

Merton Hunte has joined our staff as program advisor/operator. Merton previously worked in Accounting at UTCS. Dave Sansom, in his new programming position, spends part of his time at the New Physics Terminal (NPT). He will continue to supervise the Student Advisors and to provide program consulting to users at AST.

The physical layout of ASUT will continue to change throughout the academic year. An additional room is now available for writing and debugging programs. This is one solution to the periodic overload in the keypunch/reader/printer area. Rearrangement of the available space is another step in this direction. We are in the process of redecorating rooms 1071, 1073 and 1075 to improve the working environment. A major improvement in facilities will come in the second term when VIVA units are installed at ASUT.

The number and variety of terminals at AST has increased and continues to increase. In addition to the Volker-Craig screens, two CYBERNEX APL terminals have been placed in Room 2104. All the DECwriters have been moved into Room 2105 to make space for two IBM 3278 screens which will be arriving during the fall term. The latter will make possible general access to the full screen editing features of the recently installed ATMS word processing package.

For users requiring assistance with programming problems or having difficulties operating the equipment in Sidney Smith, an advising service is available in Room 2100. Users who plan new applications that involve computing are encouraged to contact the CSR, Bill Fehlner, at 978-6509 for advice in choosing the most effective systems and packages.

We are excited about the future of AST and ASUT and hope to fully satisfy the needs of our expanding user community. Feel free to come in and see us if you have questions or suggestions about the development of the Arts and Science Terminal.

Bill Fehlner
Dave Sansom
Merton Hunte

SCARBOROUGH COLLEGE

The staff of the Scarborough College Computer Centre would like to welcome back all students, faculty and staff from their summer vacations. We would also like to welcome new students to the campus.

The summer was relatively quiet, with no changes in our local hardware. (However, during the summer, UTCS replaced the existing IBM mainframes on the St. George campus with two 3033N8s.) In August Robert Heard, the Operator/Advisor at Scarborough College Computer Centre, left to spend a year travelling. Robert had worked at the Centre for the last two years and his presence will be missed by all members of the college community. Bon Voyage Robert!

For those who haven't been to the Computer Centre, we are located on the sixth floor of the Science Wing. The hardware at the Computer Centre includes:

1. **Batch Terminal** - consisting of one line printer (600 lpm) and one card reader (600 cpm), which communicate with an IBM 3033N8 located on the St. George campus.
2. **Keypunches** - 13 IBM 029 keypunches are available.
3. **Interactive Terminals** - there are four screen and four hardcopy dial-up terminals at the Centre which can be used to communicate with any of UTCS' mainframes.

The Computer Centre supports all academic and administrative computing at the College and provides access to all computer resources offered by UTCS.

The normal operating hours at the Centre during the Winter Session are:

09:00 to 22:00 - Monday to Thursday
09:00 to 17:00 - Friday
12:00 to 17:00 - Saturday

If things get a bit hectic around registration time, take a break! Come up to the Computer Centre and meet our staff. We would be happy to explain the equipment and to help you with any computing needs.

Bob Blackburn

ERINDALE COLLEGE

To all returning staff and students and to all new students at Erindale College, Peter Wall and Howard Lem extend their greetings and best wishes for the new academic year. Staff and students are invited to drop by the computing centre in Room 2039 of the South Building to see the facilities that UTCS has to offer.

Peter joined UTCS this summer as the new Computing Services Respresentative (CSR) at Erindale. He is located in Room 2043 across from the computer centre. Howard is the Terminal Support Advisor and is in Room 2039.

UTCS maintains excellent facilities at Erindale where users can do the computing in a friendly environment (air-conditioned and wall-to-wall carpet!). For batch users there is a keypunch room and a remote job entry terminal connected to the main UTCS academic computer, downtown. These facilities include:

- 2 600 card/minute readers
- 1 600 line/minute printer
- 1 300 line/minute printer

continued...

ERINDALE COLLEGE continued

- 1 8 inch floppy disk reader
- 13 keypunches

For interactive users there is a separate, quiet terminal room for use with TS0, WYLBUR, APL, ATMS and DEC. Included are five screen and nine hardcopy terminals with lots of workspace beside the terminals for books and notes. A Xerox Diablo terminal is also available for high quality output.

A small reference library with all major texts and manuals is available for use as is a separate workroom with calculators. Operations assistance and program advising are available at all times when the centre is open. The hours of service for the 1980-81 academic year are:

Monday - Thursday	09:00 to 22:00
Friday	09:00 to 17:00
Saturday - Sunday	12:00 to 18:00

We look forward to seeing you this year.

Paul Shindman

INFORMATION OFFICE

The UTCS Information Office, located in Room 206 of the Engineering Annex building, provides users with a variety of services.

In addition to supplying sections of the UTCS USERBOOK at minimal cost, there is a stock of IBM publications and other computer-related material for sale. These materials include: text processing documentation, statistical publications, coding forms, terminal ribbons, printwheels and diskettes. Items not regularly stocked can also be ordered through the Information Office.

The Information Office also houses a user reference library with all software documentation catalogued and available. This collection includes subscriptions to a number of computer reports which are updated monthly. There is also an extensive collection of IBM reference manuals, periodicals and newsletters from locations all over North America.

Additional services are also arranged through the Information Office, one of which is the assembling of documentation for distribution in computer courses. Orientation lectures on UTCS services are also provided upon request.

The Information Office is open from 9:00 a.m. to 5:00 p.m., Monday to Friday. For further information please phone Dawne Smith at 978-8995 or Sandy Ballantine at 978-4990.

Dawne Smith

ACCOUNTING

Accounting Services, as part of the UTCS Services Support Group, handles requests for new accounts and Service Access Codes (SACs) as well as changes to existing accounts.

For those unfamiliar with the UTCS accounting structure, the following describes basic account divisions and how they are funded and controlled.

UTCS accounts and codes are structured on three levels. Operating interdependently these consist of the Blanket Purchase Order Account Number, the Customer Account Number and the Service Access Code.

continued...

ACCOUNTING continued

Blanket Purchase Order Account (BPOA)

Accounts are normally funded by the customer raising a Blanket Purchase Order through his/her Department. This Purchase Order encumbers or reserves the funds required to meet the estimated cost of the customer's computing at UTCS for a limited period of time, usually a fiscal year. The dollar amount shown on the Blanket Purchase Order is recorded by UTCS in a holding account, called a Blanket Purchase Order Account (BPOA). This amount becomes the customer's credit limit or allotment. It can be raised or lowered at any time by requesting an increase or decrease on the PO through the University's Purchasing Department.

Customer Account Number (CAN)

The allotment in a BPOA can be divided out or budgeted for different individuals, projects, courses, etc. at the next control level, called the Customer Account Number (CAN). If all funds allotted to a BPOA are used for a single purpose, one CAN is established and the spending limit on that CAN is identical to the total amount allotted to the BPOA. However, any number of CANs can be set up, each with individual spending limits (the total of which should not exceed the BPOA allotment).

Service Access Code (SAC)

To access the various software products and services on any of the UTCS computing systems, a Service Access Code (SAC) must be established for each machine system that the customer intends to use. SACs are set up for users who are authorized owners or holders of a valid Customer Account Number. Any number of SACs can be set up under a single CAN and the CAN holder may distribute these SACs to other individuals. In this case, it is up to the CAN holder to control the spending limit for his account. This may be done by requesting that a dollar limit be set on a SAC and/or by restricting the types of services which a SAC may use.

Conditions of Usage

The following conditions of usage apply to all UTCS Service Access Codes:

1. A SAC is issued to the Customer Account holder and, as such, is non-transferable without the authorization of UTCS Accounting Services.
2. Other persons using such SACs under the supervision of the Customer Account holder must be registered with UTCS Accounting Services.
3. All authorized code users are expected to take the prescribed steps to protect codes from unauthorized use (see *USERBOOK SECTION 2)* and to use the code only for access to private files created by the code, other special files made available to that code or files in public libraries.
4. Users are requested, for their own protection, to report any improper use of the computing facilities to UTCS Accounting Services.

Billing: Monthly Statements

At the end of each month, all charges accrued for the month are billed against the Blanket Purchase Order which funds the computing services at the various account and access levels. The unused portion of the encumbered amount of the Purchase Order becomes the BPOA allotment for the next month's usage. At the end of the month, detailed statements are mailed out to the individuals within each Department responsible for budget control at the various levels. The various reports are summarized below:

Departmental Summary Report - sent to Departmental Representatives showing a record of activity on each BPOA and CAN used by the Department.

continued...

ACCOUNTING continued

BPOA Report - mailed to persons in whose name the POs have been raised (BPOA holder). This report shows a summary of all activity on CANs drawing allotments from that BPOA.

CAN Report - addressed to persons in the Department responsible for control of expense at the CAN or project level. This report contains a detailed summary of job charges, storage charges and miscellaneous items such as documentation billed directly to the Customer Account Number.

If you have any questions or problems concerning UTCS accounting, please contact the UTCS Computing Services Representative (CSR) for your Department.

Marg Doherty

PUBLICATIONS

UTCS produces a variety of in-house documentation to acquaint the user with all resources available at UTCS and to enable him to make use of facilities in which he is interested. The following is an outline of the various publications available at UTCS.

USERBOOK

USERBOOK is the official reference manual for all UTCS computing services. Its modular design allows each subscriber to compile a reference manual customized to meet individual documentation needs. USERBOOK is updated on a regular basis. Updates are automatically mailed to subscribers.

Reference Cards

A series of pocket-sized reference cards, summarizing the JCL and/or command lists for heavily-used packages, is available. These reference cards point to the appropriate chapter/module of USERBOOK for more detailed information. The INTRODUCTION TO HSJS card is an example.

HOW TO Series

The HOW TO series of manuals assists users in the operation of the self-service equipment at UTCS. Each manual describes the basic techniques required to operate the equipment at a given terminal; step-by-step explanations are accompanied by examples and photographs. These manuals can be distributed as stand-alone documents or as optional USERBOOK modules. Some of the available titles are:

HOW TO USE
- AN IBM 029 KEYPUNCH
- AN IBM 2501 CARD READER
- AN IBM 1403 LINE PRINTER

COMPUTERNEWS

COMPUTERNEWS, the UTCS newsletter, is a monthly publication which describes current staff and systems activities. It is available free-of-charge to UTCS users.

Supplementary Materials

In addition to the above-mentioned publications, various supplementary documents are available at UTCS. An example is *A GUIDE TO UTCS PUBLICATIONS*. This publication provides a detailed description of the organization of UTCS' official reference manual, USERBOOK, and provides a brief outline of other UTCS publications.

Copies of all UTCS publications may be obtained from the UTCS Information Office, Engineering Annex, Room 206.

Paul Shindman

WELCOME TO COMMUNICATIONS AND SMALL SYSTEMS

The Communications and Small Systems (CSS) Lab is a specialized, mini-computer facility for the acquisition, display and analysis of data derived from a variety of sources. Data can be acquired remotely, recorded on analog tape recorders and fed into the computer through the analog-to-digital converters. X/Y co-ordinate data, like terrain maps, can be entered through the digitizing tablet under various menu-driven software packages. Even photographic data can be entered via a video camera and television digitizer system.

Once data is entered into the system, you can manipulate it with powerful tools such as fast Fourier analysis, autocorrelation, etc. It can then be filtered, displayed, plotted and printed out. For certain applications, you can even put data out through a digital-to-analog converter for playback or other processing. The analysis programs are menu-driven for user convenience. They permit scrolling through data, expanding or compressing data or filtering and integrating on a high- resolution (1024 x 1024 points) vector-scan display screen. Plotted data emerges from the Zeta 160 plotter with resolution to 0.01 inches. The digitizing tablets boast an area of 20 x 20 inches with resolution down to 1/100 of an inch.

The user stores data on a variety of media, using the Lab systems. Magnetic tapes (2400', 9-track) are for rent from our large library and the dual tape drives handle both 800 and 1600 BPI densities. Disks are available from our library (the removable cartridge-type) with a storage capacity of 2.4 MegaBytes. Also available are floppy disks which store less information but are very portable. We have access to a number of other storage media for data conversion, if necessary. You can also transfer data to the DECsystem-10, the PDP-11/70 Unix system and the IBM 3033 systems.

Both new and returning users will notice an expanded micro- computer area. In addition to the two Z80 based micros (S.D.Sales, Xitan Z80), we have recently acquired the Radio Shack TRS-80 with the expansion interface and disk drive; a Western Digital Pascal MicroEngine with 8" floppy disk drive; and an Apple II Plus with dual 8" double-sided, double-density drives. Although these systems are undergoing systems-program development for various applications, they should soon be available for rental to the CSS user community.

Among projects currently underway at CSS are the analysis of heart-beats for heart-valve anomolies, the recording and analyzing of current fluctuations in the power supplied to an electric arc furnace and the development of the data acquisition/display system at the CN tower. Electron micrographs of single-celled animals are being digitized so as to observe the main structures by tonal difference analysis for subsequent display on the video display unit (as a line drawing representation).

If you have applications which involve almost any form of data acquisition and/or analysis, contact the Lab coordinator, Phil Selby, at 978-4600 to arrange for a demonstration and discussion of your needs.

Phil Selby

WYLBUR AT UTCS

Are you tired of batch computing? Have you ever found it awkward or inconvenient to make corrections to your deck using a keypunch? If you answered 'yes' to either of these questions, perhaps it's time for you to consider using WYLBUR.

WYLBUR is an interactive system at UTCS that is designed with the batch computing user in mind. WYLBUR users don't have to deal with keypunches, punched cards or card readers. Instead, they use a personal typewriter-like terminal to communicate with the computer (over regular telephone lines). They can enter, save, correct and submit their jobs, and examine the results using this terminal. Furthermore, they have at their disposal a powerful editing system which makes job preparation and correction much easier than with cards.

Since WYLBUR users keep their data on the system, it is available for correction any time that the IBM 3033N8A is running. It is no longer possible to inadvertently leave that critical deck at home, and it is no longer necessary to carry heavy boxes of cards from their storage place to the card reader. WYLBUR uses its own special data encoding system which keeps online storage cost to a minimum.

Users can take maximum advantage of WYLBUR when they have a typewriter terminal in their office or home. Some users use WYLBUR on terminals in the public terminal areas.

Conversion from punched card to the interactive environment is unusually easy. The typewriter terminal which is used to access WYLBUR is easy to operate and maintain. WYLBUR provides features which most users find convenient and powerful. WYLBUR is designed specifically to assist batch processing used in conjunction with existing batch programs. UTCS has the necessary resources to assist users in using WYLBUR effectively and quickly -- including introductory courses, advising facilities and online and hardcopy documentation (some documents are specifically written with the beginning user in mind).

Interested? If so, there are three ways to get more information:

- Copies of the *WYLBUR User's Guide* can be obtained through UTCS' GPJS service by running the following procedure:

```
//prepunched jobcard
/*JOBPARM L=50
// EXEC WYLMN
/*
```

The output generated by this job will produce a copy of the Guide on 8.5 by 11 inch paper (UTCS form 2009) and will print about 5000 lines.

- UTCS expects to offer a 3 hour introductory course on WYLBUR in the fall. If you are interested, please call the Information Office at 978-4990.
- Your CSR would be pleased to give you more information about WYLBUR at UTCS.

In the meantime, the next time you go to read in your box of cards, please remember that there is an easier way!

Dave Reed

CLASS C AND CLASS E SERVICES

UTCS currently offers U. of T. users two low cost batch services - Class C and Class E. Both services offer computing at lower rates than either Class A or B. Class C and E jobs are executed weekdays between approximately 01:00 and 06:00.

The difference between these two services is mainly in the charging algorithms. Class C jobs incur no charge for CPU time used. Other items like memory usage, I/O usage (tape and disk EXCPs, VIO pages), peripheral devices (tape, disk mounts, etc.) and unit record processing (cards read, lines printed, cards punched etc.) are charged the same rates as in Class A and B. A service factor of 0.75 is usually used to calculate the charges; a service factor of 0.375 has traditionally been applied to the memory usage charge during the summer months of June to September.

Class E jobs, now executed on the 3033N8A computer, receive no charge for memory usage. The service factor used to calculate the CPU time charge is 0.044. Charges for I/O usage, peripheral devices and unit record processing are calculated as in Class C. Class E jobs incur a minimum charge of $15. if the total of the CPU time, I/O usage and peripheral device charges is not greater than this amount. Obviously Class E is designed for users with programs that require large amounts of memory usage.

To determine whether your Class C job can be run more cheaply in Class E, consider the following. First, only those Class C jobs which use more than 70K of memory, averaged on the the job, can *potentially* save money by running in Class E. During the June to September period this figure becomes 140K. Secondly, of the jobs satisfying the first criterion, those in which the total of the Class C charges for memory usage, I/O usage and peripheral devices exceeds $15. will cost less when run under Class E.

Another difference between Class C and Class E lies in the maximum amount of memory which can be obtained. Class C jobs can at most use 500K of memory. Class E jobs can request up to 1000K of memory if a /*SETUP REGION statement is used. Thus Class E may appeal to some current Class B users whose programs need between 500K and 1000K of memory.

Users should note that the Class E service option must be requested on the GPJS SAC request form if access to this service is desired. If Class C and Class E services interest you, your CSR will provide more information.

Bob Chambers

TEXT PROCESSING AT UTCS

What is Text Processing?

The principal product of any university is thought -- thoughts usually expressed in words. To assist people who prepare and revise large documents, UTCS provides a collection of services generally gathered under the title of text processing.

Few phrases heard in offices today are so commonly used and yet so poorly defined as text processing or word processing. The terms are currently used to describe a broad range of approaches rather than a specific idea. For our purposes text processing is a *tool* to assist in the production of written information, as is the ball point pen or type-

continued...

TEXT PROCESSING continued

writer.

Text processing services are an important and relevant tool. They can cut in half the amount of time required to produce papers that are long, that require more than 2 drafts and/or that are repetitive. Time is saved in terms of actual typing, correcting of errors, editing and proofing. (It should be noted that text processing systems are not an effective replacement for a typewriter in all cases -- people preparing small documents that require little or no revision could probably manage with a conventional typewriter.)

How does it Work?

Text processing services are not as mystical as some would have you believe. Text processing systems can be compared to tape recorders -- as useful and uncomplicated as a home stereo set or as complex and sophisticated as those found in a recording studio. Both the tape recorder and the text processing system can be used to record information; both can provide the capabilities to allow editing of information; both store information on a magnetic medium; and both allow the information to be accessed and played back.

Functions performed by text processing systems permit the user to input, correct, manipulate, edit and print out text. Users can include 'formatting information' in the text as they enter it to make the system produce documents with automatic right justification, page numbering, page headings and footings and footnotes. These features affect the aesthetics of the finished document.

The main advantage of text processing systems is that once text has been entered correctly it *need never be retyped or reproofed.* Thus, text entered into a text processing system can be maintained with the same assurance achieved when recording music on a tape recorder -- it is permanent until you deliberately change it.

Text Processing Services at UTCS

UTCS provides a number of different text processing systems, each one for a different type of user. Some of our systems, in addition to providing the facilities described above, check spelling, automatically hyphenate and provide 'electronic mail'. UTCS also has systems which can be used to prepare material for typesetting. Finally, UTCS is able to process texts (in machine readable form) for the production of concordances of various kinds.

The reader can probably see that text processing services, as provided by UTCS, are many and varied. If you are interested in learning more about how UTCS can assist with your text processing needs, contact your Computing Services Representative (CSR).

John Bradley

VIVA UPDATE

VIVA comprises eight experimental computing workstations which make the power of a modern computer accessible to people with little or no background in computing. There are no commands to remember and no ambiguous keywords or JCL errors to haunt the user. Each workstation prompts its user with fill-in-the-blank menus or screens. It guides him through a requested function with helpful messages that appear either when he asks for assistance or enters incorrectly.

Last September, to test the basic concept of such workstations, UTCS installed the eight prototype workstations in a 'controlled environment' room in the Engineering Annex building. The primary service was submission to the High Speed Job Stream (HSJS) student debugging service. Those enrolled

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VIVA UPDATE continued

in selected computer programming courses from several faculties had access to VIVA service in the fall and spring terms. Improvements and enhancements were made as needed and student users were satisfied with the overall service.

Students particularly liked the full screen editor, a replacement for the noisy keypunches used by some courses accessing the HSJS service. However, the speed of the connection between workstation and main computer was not satisfactory to the majority of users. Similarly slow was the speed of reading a student's file system into the workstation at the start of a session and of writing it out at the end.

During the relatively quiet summer term, VIVA was made available to a limited number of people in the University community, namely those who had used it in previous terms or who had some exposure to interactive computing. At this time the active VIVA development group concentrated on improving response time as well as on finding ways to provide the VIVA service to more users at a lower cost.

Ongoing investigations continue. In the fall term we hope to offer several courses using the enhanced workstations. In the spring we plan to install an additional group of workstations in one other location on the St. George campus. Future plans include a fully automated office environment with word processing, electronic mail and scheduling; a laboratory version with statistical analysis of online experiments; and an expanded student service with online debugging and execution of programs. Services available on most versions will include a small database facility, file transfer to and from UTCS mainframes and simulation of special terminals to UTCS mainframe services (such as ATMS and TSO). We envision that many of these will be in departmental or unit offices rather than in public areas.

VIVA is an ongoing project. We would be glad to show you what we have done or to talk about our plans. Contact your Computing Services Representative (CSR) for general information. Contact Terry Wood at 978-6134 if you have ideas or comments specific to VIVA.

Ian F. Darwin

REPORT ON THE UTCS USER SURVEY

Earlier this year UTCS distributed a questionnaire gathering users' opinions so as to assess the quality of our services. Just under three hundred questionnaires were returned. The raw results are presented below with a brief explanation of each table. Because many questionaires were received only recently, UTCS is presenting the raw data at this time. We are currently interpreting the data with various analyses (cross tabulations, correlations etc.).

The raw data collected came from a wide cross section of users. UTCS is satisfied that with the anecdotal comments received and with the results of a comprehensive analysis of the data, improvements and enhancements to services will be effected.

Respondent Profile:

The survey was answered by a wide cross section of our user population, both by discipline and affiliation. As expected, a large percentage of responses came from the Physical Sciences and Engineering. However, a representative number of responses came from the Arts, Humanities and Social Sciences. In total, there were responses from forty-seven different departments and disciplines. The respondents to the survey were also well experienced with computing: over eighty percent have used UTCS facilities for more than two years. (Of these, twenty percent have been computing at U of T for more than eight years.) The computer applications were almost equally divided between research (44%) and instruc-

continued...

USER SURVEY continued

tional (49%). The remaining seven percent were administrative users.

Respondent Profile	# of People	%
Faculty	43	14.5
Graduate Student	44	14.9
U. of T. Staff	34	11.5
Undergraduate	128	43.2
Other	32	10.8
No response	15	5.1

Overall Satisfaction

Of the surveys returned, 74% indicated that UTCS facilities were adequate, ergo most users are satisfied with our services. Twenty-six percent were dissatisfied and their complaints centred around a few areas indicated below, just as our satisfied users found several common areas of satisfaction. Of the experienced users (those who have used UTCS facilities for more than two years), 44% found that UTCS' overall performance had improved in the last two years. The two major reasons for this were improved job turnaround time and the approachability of UTCS staff. Ten percent felt that performance had decreased, due to crowded facilities.

Currently, UTCS is unable to expand our facilities due to both space allocation and budgetary restrictions. This problem is exemplified in the response to the question: "What one change in UTCS services and facilities would make you happiest?" Almost half of the users (45%) indicated that they would like to see an expansion of current facilities and half of these specifically requested more interactive and VIVA facilities. The three most liked and disliked services are indicated in Table A, to follow.

Educational Aids and Materials

Table B shows the responses to the question: "How satisfied are you with UTCS educational aids and materials?" Respondents are generally satisfied but did point out several areas in need of improvement. As a result, UTCS is currently working on ways of improving and streamlining both online documentation and USERBOOK.

The results shown in Table C indicate how satisfied the respondents were with the facilities and services listed. The only major problem lies in the area of keypunch and CRT maintenance. This problem has been given considerable attention and users can expect to see a definite improvement this fall.

We would like to thank all users who took the time to reply to the survey. Thoughtful comments were made that will be seriously considered by UTCS. Computing Services intends to continue improving. However, changes will be made only after thorough consideration is given to the effects on users' work.

Users interested in the results of the survey can obtain a listing summarizing the responses from their CSR.

Ralph Lombardi

OVERALL SATISFACTION

Liked		Disliked	
Availability of Service	18%	Crowded Facilities	39%
Advising	15%	Keypunch and Terminal Maintenance	17%
Fast Turnaround	11%	Advising	9%

Table A

Educational Aids and Materials	Highly Satisfied %	Satisfied %	Neutral %	Dis-satisfied %	Highly Dis-satisfied %
USERBOOK	5	48	24	16	8
Online documentation	7	45	26	19	5
Reference cards	12	47	34	7	1
Short courses	16	29	35	14	6
COMPUTERNEWS	12	38	41	6	2
System logon messages	10	41	38	5	6

Table B

Facilities and Services	Highly Satisfied %	Satisfied %	Neutral %	Dis-satisfied %	Highly Dis-satisfied %
Availability of software packages	25	56	12	6	1
Accessability of advisors	19	48	19	13	1
Helpfulness of advisors	22	37	21	13	8
Ease of acquiring access codes	15	34	34	13	4
Reasonableness of charge	5	29	36	16	13
Security of system	8	31	43	14	4
Job turnaround time	18	41	20	16	5
Response time for:					
DEC-1090	11	36	35	11	6
APL	12	47	28	6	8
TS0	11	50	24	8	7
WYLBUR	31	40	25	2	2
Maintenance of RJE terminals	6	37	35	15	7
Reliability of system	11	45	25	13	5
Hours of service	18	47	14	19	3
Convenience of access to computing facilities	16	46	20	15	2
Availability of online storage	21	42	21	12	4
Tape Library facilities	12	48	25	11	3

Table C

UTCS MOVES TO ATMS-III

On August 8th at 4:30 p.m. UTCS' ATS system went down for the last time. Although it provided good service to our users for several years, ATS had become too old to be efficiently supported by UTCS. Replacing it is IBM's new ATMS-III system.

ATMS-III incorporates many features of ATS, thus allowing ATS users to convert with minimum inconvenience. It also offers many new features, particularly for the 3270 terminal user.

UTCS began planning the conversion several months ago. A factor that precipitated this early planning was the impending sale of the IBM S/370-165-II (in August). ATS ran on the 165, the only mainframe computer able to offer it an appropriate operating environment.

Planning the ATS to ATMS conversion involved:

- preparation of conversion courses and documentation
- development of a process to move documents of active ATS users to the new mainframe computer
- modification of IBM's ATMS-III, adapting it to the specific needs of UTCS users
- transferring communications hardware (which allows users to interact with ATMS) from the 165 to the new mainframe computer.

The August 8th weekend was crowded with activity. UTCS staff co-ordinated (1) preparation of the basic ATMS system with (2) the movement of ATS documents with (3) changes in hardware. And to further challenge the organizing abilities of our staff, an upgraded APL system was installed and converted from the MVT to the MVS operating system! Despite the complexity of this operation, the busy weekend culminated -- Monday morning -- with the successful installation of ATMS-III. Users who had been actively using ATS on Friday, August 8 were able to continue their work on the new system, with minimal difficulties.

However, the conversion to ATMS-III is not complete. UTCS is currently preparing new, more permanent ATMS-III user documentation. Courses in ATMS-III for new users and courses to introduce new ATMS-III features to existing users must be prepared. System changes will be undertaken to bring new ATMS features into our system, as IBM provides them. In short, the support provided by UTCS will be an on-going process.

John Bradley

Course Registration Form

Course____

Name____

Campus mail address____________________________

____

Campus_______________________________________

Phone____

CAN____

Are you the CAN holder?_________________________

(If not, written permission from the CAN holder must be received prior to registration.)

Please fold the completed form (with letter of permission attached, if necessary) and mail it to the address on the reverse side.

You will be notified by telephone of course dates and times.

fold here

UTCS Short Courses
11 King's College Rd., Room 206
University of Toronto
Toronto, Ontario.

MVS SHARP APL

On August 11 UTCS made the I.P. Sharp MVS System it's production APL system.

APL is a sophisticated, symbolic language designed for a completely interactive environment. It is designed for the user who wishes almost total independence from the technical hardware characteristics of the computer.

APL can be used in a broad class of applications. It is especially recommended for symbolic logic problems, computer-assisted instruction (CAI), artificial intelligence and other applications that require considerable symbolic manipulation.

APL also has broad vector handling capabilities and the ability to allow a skilled programmer to do a diverse range of numerical calculations easily. Accordingly, it lends itself readily to business applications.

The APL language permits array-oriented basic routines. These routines greatly reduce the need for explicit control structures necessary in virtually all other languages. Computer housekeeping is thus reduced to a minimum and the user concentrates on the problems themselves.

APL is especially useful for those who would like to learn a language and yet not be heavily involved with syntax. This can be done because of its concise and condensed notation. It is specifically designed such that the user needs minimal information about computer hardware and system software.

Currently, UTCS is in Phase II of the APL installation project, striving to quickly make new features of MVS Sharp APL available to the user. Documentation is available and a drop-in series of specific problem-solving seminars is underway. A full range of UTCS non-credit courses is being planned.

APL is a powerful tool, extremely useful in many situations. For more specific information, please see your Computing Services Representative (CSR).

Herb Kugel

FALL SHORT COURSES

This fall UTCS is offering a number of short courses for the user community. Topics include an introduction to UTCS as well as various languages, machines and processors.

In order to register for a course, you must either be a CAN (Customer Account Number) holder or have written permission from your CAN holder.

Some of the listed courses do not have accompanying dates. We require that sufficient demand be generated prior to the setting of firm dates. Sufficient demand is defined as 10-15 people.

If you are interested in a topic not listed in the selection that follows, please note it on the tear-out registration form on the opposite page. UTCS will contact you about the possibility of holding such a course.

Registration is easy. Either fill out the pre-addressed, tear-out registration form and mail it or phone the Information Office at 978-4990. Consequently, if the course is listed with a date, you will be informed of times and location of the lectures. If no date has been set, you will be contacted shortly with pertinent information.

continued...

FALL SHORT COURSES continued

APL201 - MVT to MVS APL (problems)

This is a seminar/workshop for current APL users who are experiencing difficulties with the transition from MVT to MVS APL. It will not highlight new features found in MVS APL (see APL202) and is not intended for novice users of APL.

Major topics of discussion: New signon procedure, workspace and file compatability, changes to system commands, quad functions as preferred forms, language differences, utilities (fileprint and RJE).

APL202 - MVT to MVS APL (new features)

This is a lecture/lab course for current users of APL that will highlight new features of MVS APL. Users having difficulty in the transition from MVT to MVS APL are urged to take APL201. This course is not for novice users of APL.

Major topics of discussion: N and B tasks, shared variables, error trapping, formatting and execute, packages, improved editing capabilities.

BMD201 - Intermediate BMDP

This is a relatively complete BMDP course, with quick coverage of elementary material for those not familiar with BMDP syntax. Those taking it should have used BMDP before, or at least another stats package/language.

Major topics of discussion: Common elements such as data input and file creation, data limits, data modification and selection, SAS interface, program specifics such as specifying regression and anova models and others (depending on class wishes).

DEC101 - DECsystem-10 Novice Users

This course will consist of three lectures and one lab which will provide all the basic information required to start on the DEC-10. This course is for novice users only.

Major topics of discussion: Terminal control (control characters and terminal input/output capabilities provided by the system), login/logout, disaster handling, file handling and management, how to get hardcopy, how to reclaim lost files, how to get help (both human and non-human).

Class dates: Week of September 22

DEC201 - DECsystem-10 Assembler

This course will consist of five lectures aimed at discussing MACRO-10 - the assembler on the DEC-10. This course is intended for experienced DEC-10 users only.

Major topics of discussion: Hardware considerations, DEC-10 instruction set, assembler formatting and pseudo-operations, monitor calls, debugging techniques.

Class dates: Week of October 20

DEC301 - DECsystem-10 Advanced Users

This course will consist of five lectures aimed at discussing the DECsystem 10 in some detail. The idea is to provide information that would be useful to most users over the long term. Emphasis will be on details not likely to interest word processor users. This course is only for users who have some experience with the DEC 10 and is not intended for novice users. (See DEC101.)

Major topics of discussion: System structure and components, little known features, MIC, file system details (including the file daemon), tape use and file backup/restore, a basic intro to TECO, the mail system, IBM RJE, a thorough examination of all monitor commands, tools for programmers.

Class dates: Week of October 6

FOR101 - Techniques in FORTRAN

This course presents FORTRAN in a structural manner to foster top-down structured programming. Techniques in reading and

continued...

FALL SHORT COURSES continued

writing clean and manageable FORTRAN programs are offered, as well as program testing and common pitfalls. An elementary knowledge of FORTRAN is desired, but not required.

Major topics of discussion: Program entities, data types, operations on data, control constructs, input and output, data organization.

GRA001 - Graphics for non-programmers

This course is a workshop that gives a simple introduction to the concepts of computer graphics through the use of UTCS' KIG package. Programming knowledge is not required and will not be taught.

Major topics of discussion: Piecharts, barcharts, line graphs, simple drawings, pictures, diagrams, using an interactive terminal for graphics.

GRA101 - Graphics for Programmers

This course outlines the basic concepts of computer graphics through the use of batch and interactive terminals. It also serves as an introduction to more sophisticated graphics packages and routines. A knowledge of FORTRAN and/or PL/1 programming is required for this course.

Major topics of discussion: An examination of KIG, simple graphics programming using basic graphics routines, the batch environment, GOULD, CALCOMP, other graphics packages.

JCL101 - JCL for beginners

This course provides an introduction to JCL (Job Control Language) on the IBM 3033N8. As this course will make use of the card reader exclusively, those wishing to take it should come to the first class with a valid SAC (Service Access Code) and password.

Major topics of discussion: What JCL is for, types of statements, coding JCL, accessing tapes, useful PROCs, utility programs, dataset manipulation.

JDS201 - Stats on the DEC-10 (SCSS)

This course offers first a brief overview of the stats packages available on the DEC-10, and then concentrates on SCSS (SCSS is an interactive SPSS). Those wishing to take this course should have some DEC-10 experience coupled with some stats knowledge.

Major topics of discussion: Concepts in interactive statistics, file creation with SCSS, the SPSS interface, basic SCSS syntax and simple data analysis.

NUM201 - Numerical Packages

This is a two-hour seminar that will show how to find your application in the various libraries (IMSL, EISPACK, etc.), and introduces the libraries available. Those taking this course should have experience with a programming language such as PL/1 or FORTRAN.

Major topics of discussion: What to find where, an overview of simulation and MPSX.

PLI101 - Techniques in PL/1

This course presents PL/1 in a structural manner to foster top-down structured programming. Techniques in reading and writing clean and manageable PL/1 programs are offered, as well as program testing and common pitfalls. An elementary knowledge of PL/1 is desired, but not required.

Major topics of discussion: Program entities, data types, operations on data, control constructs, input and output, data scope, data conversion/mapping/overlay, special conditions handling, CHECKOUT vs OPTIMIZING.

SAS101 - Statistical computing with SAS

This is an introductory course that places a heavy emphasis on concepts and the basic approach to statistical computing. Some ele-

continued...

FALL SHORT COURSES continued

mentary JCL will be covered and enough SAS will be taught to create a file from 'simple' raw data for preliminary analysis. Reference will be made to some of the features in SAS.

Major topics of discussion: Definition of terms (i.e., variables, observations and missing values), creation of files from raw data, data cleaning, descriptive statistics.

SAS201 - Intermediate SAS

This course is a continuation of SAS101. Those wishing to take this course should have completed SAS101 or be familiar with SPSS, BMDP, SAS, or a programming language such as PL/1, FORTRAN, etc. This course will get into the features of SAS that are only touched on in SAS101.

Major topics of discussion: Input from 'not so simple' data, report writing using SAS, dataset manipulation (splitting, updating, merging), more complicated procedures.

SPE101 - Introduction to SPEAKEZ

This course gives an introduction to SPEAKEZ with an emphasis on concepts. SPEAKEZ is a user-oriented language that allows for quick formulation of problems, for quick processing. There are no prerequisites to this course.

Major topics of discussion: Help and tutorial facilities for self-help, interfaces to SAS and SPSS, matrix manipulations, creating and saving SPEAKEZ programs.

SPS201 - Intermediate SPSS

This is a relatively complete SPSS course, with quick coverage of elementary material for those not familiar with SPSS syntax. Those taking this course should have used SPSS before, or at least another stats package/language.

Major topics of discussion: File creation, data modification and selection, report procedure, regression, descriminant.

TXT101 - ATMS for Beginners

An introduction to ATMS (Advanced Text Management System) for users with no previous word processing experience. Emphasis is on the use of ATMS on 3270-like terminals. It is not for users who only have access to typewriter terminals (i.e., Diablo 1641, 1620 or IBM 2741) or 'glass teletype' terminals (i.e., Vucom, VT100, VT52, Volker-Craig, etc.).

This is a 'hands-on' course. It is recommended that users have their own ATMS Service Access Code.

Major topics of discussion: Word Processing Concepts, Full-Screen Editing Concepts, basic facilities provided by ATMS.

TXT102 - SOS/RUNOFF for Beginners

An introduction to word processing for users who only have access to typewriter or 'glass teletype' terminals. It is based on the DECsystem-10's SOS/RUNOFF system. Previous experience with word processing systems is not required.

This is a 'hands-on' course. Users are advised that a DECsystem-10 Service Access Code will be required.

Major topics of discussion: Word Processing Concepts, Line-Oriented Editing of Text (using SOS), basic text formatting concepts (using RUNOFF).

TXT201 - ATS to ATMS for 3270 users

A repeat of a similar course offered by UTCS during the summer. It introduces ATMS to users who have access to ATMS on a 3270-type of terminal and who were previously active ATS users on typewriter or 'glass teletype' terminals. This course is not recommended for individuals who are not recent ATS users.

It will be taught as a 'hands-on' course. It is recommended that users have their own ATMS Service Access Code.

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FALL SHORT COURSES continued

Major topics of discussion: Full-Screen Editing Concepts, differences between ATS and ATMS, a discussion of some new ATMS features unavailable under ATS.

TXT202 - ATS to ATMS for non-3270 users

This course is a repeat of a similar course offered by UTCS during the summer. It is intended to assist new ATMS users who were recently using ATS and are planning to use ATMS on typewriter or 'glass teletype' terminals. It is not recommended for individuals who are not recent ATS users.

Major topics of discussion: differences between ATS and ATMS, a discussion of some new ATMS features unavailable under ATS.

UTC001 - Introduction to UTCS services

This is a seminar/workshop for anyone interested in finding out what UTCS has to offer the computing community. There are no prerequisites to this seminar, as it is a general introduction course.

Major topics of discussion: Batch jobs, interactive computing, text services, contract programming, advising, how to read USERBOOK.

David Reed

COMMUNICATIONS AND SMALL SYSTEMS NEWS

To further expand computer graphics in the CSS lab, another graphics facility has joined DECGRAPHICS-II and TABLIB (described in the July and August issues of *COMPUTERNEWS*, respectively).

The latest addition is a two-fold software package which allows a customer to communicate quickly and easily with the GT44's ZETA-160 roll-type paper plotter. The first phase is a collection of FORTRAN callable CALCOMP routines known as PLTLIB. When this is coupled with the second phase, a program called CSSZETA, the user is able to interactively manipulate the plotter's pen and paper in order to plot labelled axes and boxes, numbers, text strings and, of course, lines and points. In this way he/she may easily learn about plotter capability or test a program's sequence of calls for a subsequent application. In addition, CSSZETA satisfies a number of commonly requested applications such as the design of flow diagrams and banners.

Due to the interactive approach incorporated in this graphics facility, a user need not know how to program in order to create copy ready diagrams.

Phil Girouard

GRAPHICS FOR STATISTICS

The UTCS Statistics Product Line Group is trying to determine the statistical package user's interest in graphical presentation of data. We are currently investigating a number of packages which link directly to existing statistical packages (SAS, SPSS). Special hardware (graphics terminals) is required. Users with an interest or questions are invited to contact their Computing Services Representative (CSR).

John Roth

IMSL EDITION 8

Edition 7 of the International Mathematical and Statistical Library (IMSL) was short lived at UTCS. It became the default only on July 2 and was replaced on September 2 by Edition 8 on both the general purpose (GPJS) and high speed (HSJS) job streams. This is a much less drastic change in the library than the change from Edition 6 to Edition 7. Only 4 routines have been deleted and replaced -- GGAMS, GGAMT, GGBIR and GGMLT.

Edition 8 contains 38 new routines including:

- a routine to solve differential equations with two-point boundary conditions
- routines for inverse Laplace and two- and three-dimensional fast Fourier transforms
- ten new random number generators
- easy-to-use companion routines for cubic spline interpolation smoothing
- routines for high accuracy solution to linear least squares and generalized inverse of matrix
- a more robust non-linear equation solver which will replace ZSYSTM in Edition 9 and a new linear programming routine

A copy of the documentation will be available at the user reference library in the Information Office, Engineering Annex building. Hopefully most remote sites will also have a copy. Should additional documentation not arrive in time, copies of the documentation for the replacements plus a list of new routines will be available at the remotes. Users with questions concerning this upgrade should contact their Computing Services Representative (CSR).

John Roth

GENERAL PURPOSE SYSTEM SIMULATOR

On September 2, the default version for General Purpose System Simulator (GPSS) was changed from GPSS/360 to GPSSV. This means that '// EXEC GPSS' will now invoke GPSSV, not GPSS/360. The reason for this change is that GPSS/360 is no longer supported by IBM or UTCS, while GPSSV is fully supported. GPSS/360 will continue to be available with '// EXEC GPSS360'.

GPSSV has many new features and is upward compatible except for slight changes. Some of these differences are noted below. A more complete description is given in the GPSSV User's Manual and in *Schreiber's Simulation Using GPSS.* Reference copies of the GPSSV User's Manual are available at the user reference library, Information Office, Engineering Annex building. GPSS/360 manuals are considerably cheaper and are still available.

Among the differences are:

- Some SNAs previously truncated to integers now maintain floating point values.
- PREEMPT block operates slightly differently.
- GPSS/360 input statements coded in ABS mode format will not work in GPSSV.

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GPJS SIMULATOR continued

- User written assembler HELP routines may have to be recoded because of changes in some table sizes.

- Memory usage may increase slightly.

Users with questions concerning the impact of this change should contact their Computing Services Representative (CSR).

John Roth

BIBLIOGRAPHY SYSTEM

Prof. Raisa Deber of the Department of Health Administration has devised a bibliography system for storing information about bibliographic items to facilitate cross-referencing. Bibliographic entries can be articles, books, reports, papers or even clipping files. For each entry, one can specify an author, title, reference, optional comment line, format, location, up to three 15 character subjects and up to nine 25 character keywords. The system allows total freedom in the choice of keywords and subjects.

The system is written in SAS and the user's bibliographic database can be stored on tape or disk. The system allows for addition, correction and update of entries and performs basic 'housekeeping' such as back-up and archiving. Various reports can be generated simply by giving a single word (the name of a SAS MACRO) to the system. For example, the following reports can be generated:

- long and/or short form listing by author, keyword, subject etc.

- file index cards with bibliographic information

- sticky labels for file folders, articles etc.

- frequency lists for subject, keywords etc.

Users interested in the bibliographic system can contact Prof. Deber at 978-4267.

John Roth

POSITION VACANCIES

UTCS has job openings in the Communications and Small Systems (CSS) group for persons interested in mini- and microcomputer applications, scientific programming, interfacing and system design. CSS systems use CP/M, RT-11, UNIX* .... and machines ranging from Z-80, LSI-II to PDP 11/70.

For further information contact Manfred Wewers, Personnel Department, 215 Huron Street, 978-4834.

*UNIX is a registered trademark of Bell Labs.

Eugene Siciunas

DECSYSTEM-10 NEWS

On behalf of the DECsystem-10 support group I would like to welcome all new and returning users. Those who have used a DEC-10 at UTCS or another installation will no doubt be interested in some recent changes and future plans. These are described later in the article.

If you are a new or potential user, the following overview will be of interest.

DECsystem-10 Overview

The DECsystem-10 is a general purpose timesharing computer system manufactured by Digital Equipment Corporation. DEC-10 timesharing takes maximum advantage of the capabilities of the computer by allowing many independent users to share the facilities of the system simultaneously. In this way, each user interacts with the system as if he were its only user. The TOPS-10 operating system provides users with a powerful command language and a flexible, easy-to-manipulate file system. In addition, a full range of working software is available to every user.

The UTCS DEC-1090 has about the same raw computing power as an IBM 3031. However, in terms of both architecture and user interface, the DEC-10 is very different from other UTCS machines. For example, most of the 398 instructions operate on full 36-bit words, although some operations manipulate bytes of arbitrary size and position. Character strings are stored five per word using 7-bit ASCII. The system implements a virtual memory scheme which can be utilized or not, at each user's discretion.

The memory consists of 256K 36-bit words. Program sizes are usually specified in terms of pages, each of which is 512 words long. The system as a whole, then, has 512 pages. In addition, there are four 200 MByte disk drives on the system, providing a total of almost 160 million words of mass storage. Users may access the system through one of a total of 64 terminal interfaces.

There is also a high speed communications link connected to the academic IBM 3033.

The TOPS-10 Command Control Language consists of over 100 simple statements. By this means, the timesharing user communicates with the operating system to control the running of his task or job. In fact, all activity on the system begins with commands entered by users at their terminals. In many cases the user can omit command parameters and the operating system will supply reasonable default values. The end result is that the Command Control Language, although extensive, is easy to learn and use.

The same command control language is also used when submitting a job to the GALAXY batch system, if the user prefers not to execute it interactively. The control statements for DEC-10 batch are identical to those used by an interactive user, except that several special batch-only commands exist which allow the user to modify the flow of control in the event of an error.

There is also a 'terminal batch' facility called MIC (Monitor Interpretive Commands) which allows users to execute their own predefined command sequences. In addition, a simple command allows users to submit jobs to the batch stream on UTCS' academic IBM 3033 and to retrieve the resulting output, all the while remaining connected to the DEC-10.

In general, the user is not restricted to a few special programs while using the DECsystem-10. Instead, he is able to use any of the available utilities, editors, compilers, assemblers, debugging facilities, operating system support programs and, of course, programs he himself has written. He can create, edit and delete files; start, suspend and terminate his job; compile, ex-

continued...

DECSYSTEM-10 NEWS continued

ecute and debug his program. One of the main advantages of DEC-10 timesharing is that the user has the capability of using a large number of different programs, each brought into memory as it is needed, during a single timesharing session.

Two powerful editors are available for text file preparation. TECO, a character-oriented editor, is reputed to be the world's most powerful. The most popular line-oriented editor is SOS. Either editor can be used to prepare documents, data files, source files, batch control files or any other file containing text information.

A wide variety of compilers, interpreters, language processors and assemblers are available to DEC-10 users. A few of the most popular language processors are ALGOL, APLSF, BASIC, COBOL, FORTRAN, LISP, PASCAL and SIMULA. The very powerful DEC-10 assembler is called MACRO. In addition, there are several cross compilers available for other machines such as the PDP-8 and PDP-11, and for several of the more popular microprocessors too.

Several of the language processors can be used with an appropriate version of DDT (Dynamic Debugging Technique). This facility for interactively debugging programs has virtually eliminated the need for printed program dumps. DDT is a valuable tool for anyone engaged in extensive program development.

The most commonly used utility programs include DIRECT (determines contents of user's file directories), LINK (links and loads user programs), PIP (performs file transfers), BACKUP (saves and restores user files) and MAIL (message transfer facility).

The most important resource controlled by TOPS-10 is the file system. This is achieved through a sophisticated mass storage supervisor which controls each user's disk access without interfering with other users. All disk data is organized into groups of 128-word blocks called files. Each word can contain five 7-bit ASCII characters. The user specifies a name for each file, but need not be concerned with such details as pre-allocating space, obtaining retrieval information or maintaining an appropriate level of security for his files. The operating system dynamically performs all the necessary bookkeeping to accomplish these tasks.

When a file is created by a user, it is automatically considered to be owned by him. It cannot be accessed by other users. However, if the owner chooses to do so, he may override the system's generalized file protection scheme. He can also selectively specify which of the system's other users may access his files and exactly what kind of access they are permitted. The fact that all files are automatically associated with a particular user means that system accounting can be performed automatically. There is never any need to 'register' a file. Because the system allocates disk space dynamically on a demand basis, a user's files will grow and shrink as he uses them. This will happen invisibly to the user unless the amount of disk space he is using exceeds the quota received when the DECsystem-10 account was obtained.

UTCS has many enthusiastic users of the DECsystem-10. Neophytes and experts alike find it a useful tool because of its ease of use, fast response and forgiving nature in the event of user errors.

DECsystem-1090 Hardware

The University of Toronto DECsystem-10 has the following configuration:

Qty	Name	Description
1	KL10	Central Processor (KL10D: "MODEL B" 1090)
4	MF10	Memory (64 K words each)
3	RH20	Massbus controller (for disks and magnetic tapes)
2	TU45	Tape drives (309, 700 128-word blocks 200 MBYTE)

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DECSYSTEM-10 NEWS continued

1	DL10	Communications interface (for DN87 and DN61)
1	DN87	Communications Front end (64 ports)
1	DN61	IBM communications front end
1	LP100	Line printer controller
1	LP05	Line printer (300 LPM)
1	BA10	Hard copy controller
1	CR10F	Card reader (300 CPM)
1	TD10	Dectape controller
1	TU56	Dual Dectape drives

DEC-10 Online Accounting System

On August 5th the last major phase of UTCS' On-Line Balance Reporting System for the DEC-10 was implemented. Beginning on that date each PPN's dollar balance will be debited nightly for non-session charge items (disk storage, IPRINT, tape usage, etc.). In addition the incremental changes and reasons for them (accumulated over several days, if necessary) will be reported to the user at the time that PPN next logs in. This procedure will result in the PPN's online balance tracking the official UTCS accounting system more accurately.

The UTCS on-line accounting system allows each DECsystem-10 user to monitor system charges as they occur. There are two types of charges which are applied appropriately to each PPN:

Session charges

These costs, which arise directly from an interactive timesharing session, are for connect time, CPU time, memory utilization and disk I/O. These charges are debited from the user's balance at LOGOUT time.

Off-line charges

These costs, which result from the use of system resources not directly related to a timesharing session, include (among other things) disk file storage, tape mounts/usage and IPRINT charges.

Normally these charges are debited nightly from the user's balance. The user can obtain a session-charge-to-date report while interacting with the system by running the system program JOB. The program also informs the user of the present balance for that PPN. At LOGOUT time the user's balance is debited by the session charge and both the session charge and the updated balance are reported to the user.

In addition, the user's balance is reported at LOGIN time. The user may also see an item labeled 'Changes'. This is the total off-line charge accumulated against that PPN since the last time it was logged in. The reasons for the change are indicated by one or more of the following flags:

/RST
Reset to the specified balance by the Accounting Office.

/UPD
Updated by the specified change by the Accounting Office.

/LGT
Logout record calculation of session charge (if session charge report failed).

/CHK
Checkpoint record calculation of session charge (if logout record is missing, e.g., following a system crash).

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DECSYSTEM-10 NEWS continued

/SPL
Spooled I/O (e.g., DEC-10 line printer output).

/IBM
IBM printing (e.g., IPRINT, IBMLST).

/TAP
Tape mount and elapsed time.

DEC-10 Rate Schedule

The present DEC-10 rate schedule is included here for the benefit of our readers.

Item	Unit	Rate
*Connect	/hour	2.00
*CPU	/min	4.68
*Memory	/KWmin	.15
*Disk I/O	/K-blocks	.50
Disk storage	/K-blk-day	.75
Tape mounts	/mount	1.10
Tape usage	/hour	3.00
Tape storage	/month	1.60
Tape rental	/month	1.60
Line printer	/K-lines	2.00
Card reader	/K-cards	2.00
IBM listing	/K-lines	1.40

(* - Session Charge Item; outside the hours of 0800-1900 deduct 40%)

Users who wish to remind themselves of the DEC-10 rate schedule while using the system may read the RATES help file. The official rates schedule is contained in the file SYS:RATES.TXT.

DEC-10 User Forum

The May 1 User Forum provided users with an opportunity to discuss the present status and future plans for the DECsystem-10. The subjects discussed included 'Line Daemon' (the new telephone disconnect mechanism), password encryption, the new SEND command limitation, the effect of the PACX front end on DEC-10 connections, the role of the DEC-10 operator, IPRINT (the new IBM listing program) and several proposed DEC-10 user courses. Most of these subjects are described in more detail later in this article.

Both users and DEC-10 support staff enjoyed the chance to discuss topics of mutual interest. It is hoped that another user's forum can be scheduled sometime in the late fall.

DEC-10 User Courses

Many DEC-10 users have expressed an interest in courses to teach them how to make more effective use of the system. UTCS is pleased to announce that four such short courses have been tentatively scheduled.

1. New DEC-10 User
2. Advanced DEC-10 User
3. DEC-10 Assembler Language
4. DEC-10 Interactive Statistics and Mathematics

We anticipate that these courses will be very popular. Please see the article "Fall Short Courses" and bring it to the attention of those who don't receive *COMPUTERNEWS.*

The Line Daemon

One of the major, new policies implemented during the past year provides that dial-up lines left connected to the DEC-10, but not logged in, will automatically disconnect after a minimum period of four minutes. This became necessary because a few users remained connected to the system for extended periods of time without logging in. In the meantime others waited in vain for a

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DECSYSTEM-10 NEWS continued

port to become available.

The mechanism for accomplishing this is a new system program known as LINDAE (for Line Daemon). Once per minute this program samples the status of each dial-up line connected to the system. If the program checks the line five consecutive times with none of the conditions listed below being true, it disconnects the line. The conditions which will keep the line connected are the following:

1. the line controls a logged-in job;
2. the line controls a not-logged-in job with XOFF not in effect,
3. the line is controlled by a logged-in job and has done output during the previous minute.

SEND Command Limitations

The SEND command now requires that the sender be logged in. This became necessary due to an excessive number of anonymous messages, many of which were frivolous or malicious.

Password Encryption

All user passwords are now stored in system accounting files in an encrypted format which cannot be inverted. This will significantly enhance system security. However, lost passwords can no longer be recovered, even by systems software personnel. Forgetful users will have to request that the accounting office install a new password on their behalf.

IPRINT replaces IBMLST

IPRINT is a program for printing DEC-10 files on one of UTCS' IBM line printers. This program is more flexible and easier to use than IBMLST which it is intended to replace. It makes use of the options file (SWITCH.INI) to allow users to bury most of the information that IPRINT needs. This minimizes the typing required to do most print requests. IPRINT will do a single print request, which may involve many files, and return to the monitor.

Additional details on the use of IPRINT can be obtained from the IPRINT help file or by reading the file DOC:IPRINT.DOC.

Datapac Replaces Telenet

In early January the DECsystem-10 was interfaced to Bell Canada's Datapac network, replacing the Telenet connection utilized previously. Except for a brief period, during which a number of bugs had to be ironed out, the service to our customers was uninterrupted. The additional features available under Datapac have provided an improved overall service. In addition, U.S. customers are now able to access the UTCS DECsystem-10 through either the Telenet or Tymshare networks.

Users interested in using any of the above networks should read the online documentation file DOC:DATPAC.DOC for details.

New MIC Utilities

Several new MIC (Monitor Interpreted Commands) procedures have been made available to the public during the year. The MIC files listed below are stored in the MIC: area and may be executed by any user. The general form of the command is ".DO name" provided the user has no MIC file of the same name. The new MIC procedures are:

NEW	Sets user's NEW switch.
NONEW	Clears user's NEW switch.
LIB	Sets user's LIB: PPN.
NOLIB	Clears user's LIB: PPN.
PATH	Set user's full path.
SFD	Sets user's SFD path.
UP	Sets user's SFD path one level higher.
DOWN	Sets user's SFD path one level deeper.
OVER	Changes user's SFD path at same level.
SOUP	Makes correction file for source file update.
UPDATE	Makes final source file from correction and base files.
TOSFD	Moves file to an SFD from the UFD.
FROSFD	Moves file from and SFD to the UFD.

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DECSYSTEM-10 NEWS continued

DECUS Symposium

During the past year UTCS personnel attended three meetings of the Digital Equipment Corporation User Society (DECUS). These symposia are important in that attending them is the most convenient method available for learning about Digital's future plans. It is also a useful forum in which to discuss common interests and problems with other users of DEC's products.

Detailed descriptions of these meetings have appeared in past issues of *COMPUTERNEWS*. (See the Jan-Feb/80, Apr/80 and June/80 issues for reports on Fall/79 DECUS in San Diego, DECUS Canada in Toronto and Spring/80 DECUS in Chicago, respectively.)

Upcoming DECUS meetings include Fall/80 in San Diego (Nov 4-8, 1980) and DECUS Canada in Montreal (Feb 16-19, 1981).

For UTCS' DECsystem-10 users the major item of interest from recent DECUS symposia has been the soon-to-be-released 7.01 operating system. The many new and exciting features it contains promise to be very popular with our users. UTCS expects to install 7.01 in early 1981.

Ed West

PERSONNEL CHANGES

We welcome two Keypunch Operators to the Administrative Computing Group, Cavel McKenzie and Irene Rosiecki.

Sue Gardner leaves the Systems Group to work at Student Record Services. We extend best wishes to her. Thomas Milligan assumes her former position, a promotion to Systems Supervisor. Ray Parker has received a promotion in Operations. Congratulations both of you.

After five years with UTCS Walter Berndl has resigned as Manager of Administrative Computing. We wish him every success in his future work.

After eleven years with UTCS, Nancy Okada has left the Operations Group to join a major bank. Best wishes Nancy.

Robert Heard, former Operator/Advisor at Scarborough College, has left UTCS to travel.

The new Computing Services Representative (CSR) for Erindale is Peter Wall, who earned his MSc in Physics here at U. of T. Welcome to UTCS Peter.

Welcome also to two new operators at the Engineering Annex Terminal: Steve Cochrane and Anthony Nave.

Theresa Veira

RECENT ACQUISITIONS IN THE DCS LIBRARY

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Englewood Cliffs, N.J.,
Prentice-Hall, 1977.

Childs, B. et al, eds.
Codes for boundary-value problems in ordinary differential equations.
Berlin, Springer-Verlag, 1979.

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Proceedings.
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Arlington, Va., AFIPS Press, 1979. 2 vols.

Walker, Donald E., ed.
Understanding spoken language.
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A practical introduction to PASCAL.
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University of Massachusetts,
Amherst, 1977.

A.R. Hanson and E.M. Riseman, eds.
Computer vision systems.
New York, Academic Press, 1978.

Zelkowitz, M.V.; Shaw, A.C. and Gannon, J.D.
Principles of software engineering and design.
Englewood Cliffs, N.J., Prentice-Hall, 1979.

UTCS SYSTEMS

3033/N8A PROCESSOR

- located in Mclennan Physical Laboratories
- provides General Purpose Job Stream, High Speed Job Stream, TSO, WYLBUR
- 8 megabytes of memory
- MVS with JES2

3033/N8B PROCESSOR

- located in McLennan Physical Laboratories
- provides administrative IMS/VS DB/DC Batch, TSO, MVS/APL and ATMS services
- 8 megabytes of memory
- MVS with JES2

DECSYSTEM-10 Model 1090

- located in Sandford Fleming
- provides General Purpose Time-Sharing
- 256 K - 32 bit words of memory
- TOPS-10 operating system

COMMUNICATIONS & SMALL SYSTEMS (CSS)

- located in SF106
- DEC GT44 System with PDP-11/40 CPU
- 2 Z80 based microcomputers
- Radio Shack TRS-80
- Western Digital Pascal MicroEngine
- Apple II Plus
- DEC GT40 System with PDP-11/05 CPU
- provides specialized graphics and interactive graphics
- provides on-line and real-time computing services, data acquisition and minicomputer services

UTCS DIRECTORY

POSITION	ROOM	CENTREX PHONE NUMBER
Director		
Dr. Doron Cohen	MP350	8948
Associate Directors		
Rein Mikkor	MP350	5058
Al Heyworth	MP350	4936
Faculty Liaison Officer & Manager, Text Services		
Dr. Frank Spitzer	MP350	4619
Manager, Communications & Small Systems		
Eugene Siciunas	MP350	4967
Manager, Operations		
Derry Cox	MP350	7092
Manager, Systems		
Ward Beattie	MP350	3579
Manager, Academic Computing Services		
Ralph Lombardi	MP350	7130
Manager, Administrative Computing Services		
Manager, Services Support		
Don Gibson	MP350	5568
Administrative Officer		
Suzan Fawcett	MP350	4428
Information & Accounting Office		
General Inquiries	EA206	4990
Accounts		
Aggie Stevens (U of T)	EA206	8702
Sylvia May (External)	EA206	7148
Supervisor, Accounting & Information Services		
Marg Doherty	EA209	3960
Access Codes		
Michelle Mule	EA206	8703
Supervisor, Communication Systems		
Walter Rosocha	SF105	7087
Programming Services		
Bill Lauriston	SG201	6877

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UTCS DIRECTORY continued

Entry Services

Supervisor		
Vera Cabanus	MP368	5040
Text Entry		
Dale Wright	MP368	4565
Data Entry		
Zelda Anderson	HU405	5273
Keypunching		
Dale Wright	MP368	4565

Tape Librarians

Academic Services	MP368	7319
Administrative Services	MP368A	6693

Supervisor, Applications

Herb Kugel	SG304	7286

Computing Services Representatives

Engineering Annex Terminal		
Sue Chong	EA201	4357
Program Advisors	EA103	4516
Time-Sharing Support		
TS Advisors	SG204	6465
Mark Tapia	SG204	7109
Erindale		
	2043	828-5311
Scarborough		
Bob Blackburn		284-3173
Arts and Science		
Bill Fehlner	SS2133	6509
New Physics		
Bob Chambers	MP1202	8823
External		
Ihor Prociuk	SG205	6875,6885

Supervisors, Operations

Paul Scarborough (IBM 3033N8A)	MP335	6220
Krishna Patnaik (DEC-1090 & CSS)	SF106	4086
Dave Wong (IBM 3033N8B)	MP335	6864

Key:

EA = Engineering Annex
SF = Sandford Fleming
SG = 49 St. George
SS = Sidney Smith
HU = 215 Huron St.
MP = McLennan Physical Laboratories (New Physics)

Job and System Status Queries

SYSTEM/3033,TSO	7373
ATMS/APL	6234

Time-Sharing Services	**Dial-Up**
APL,ATMS	7200 Centrex 7201 Non Centrex
TSO,WYLBUR	6200 Centrex 6201 Non Centrex
DEC-10 Services	4224 Centrex 4244 Non Centrex
PHONE-IN ADVISING	6465

CORRECTION

Physics Terminal:

The article occuring on page 7 in this issue of Computernews entitled "*The Physics Undergraduate Terminal*" should read throughout the article as "*The Physics Terminal* ". The Physics Terminal is totally different from the Physics Undergraduate Terminal(PUT). The mistake was found after we went to press.

The Physics Terminal located in room 1202 of the Burton Tower is for use by graduate students **only.** Undergraduate students can make use of the Physics Undergraduate Terminal(PUT) located in room 200 of the Mclennan Labs. PUT will begin operation on Monday, September 29th 1980. Professors and teaching assistants should send their students to PUT in room 200 and not to the 12th floor terminal. Please note that undergraduates are **not** allowed to use the graduate facilities but should use PUT.

We regret this error and hope that no confusion has been caused.

Editor

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